

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 1 to 9.

The above amendment to claims 5 and 6 is responsive to the objection set forth on page 2 of the Official Action.

The above amendment to claim 1 is responsive to the rejection under 35 U.S.C. 112 on page 2 of the Official Action.

The amendment to the definition of A in claim 1 is based on Examples 5 and 7 of the present specification.

Claims 1 to 9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Amagai et al. (U.S. 6,794,481).

Further, claims 1 to 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. (U.S. 6,835,785) in combination with WO 03/020781.

These rejections are respectfully traversed.

As the Official Action correctly notes, the paragraph bridging pages 4 and 5, the Amagai and Ishii references constitute prior art only under 35 U.S.C. 102(e) and thus, the rejections can be overcome by showing that the subject matter of the reference and the claimed invention were, at the time that the invention was made, owned by the same person.

In this regard, both of the cited references were owned by Mitsubishi Gas Chemical Company, Inc. as is the present application, both at the time that the present invention was made and at the present time.

In this regard, see the enclosed Notice of Recordation of an Assignment for the present application indicating the Assignee as Mitsubishi Gas Chemical Company, Inc.

Claims 1 to 9 have been rejected on obviousness-type double patenting over claims 1 and 2 of U.S. 6,835,785 in view of WO '781.

Further, claims 1 to 9 have been rejected on obviousness-type double patenting over claims 1 to 6 of U.S. 6,794,481 in view of WO '781.

In reply, there is submitted herewith a Terminal Disclaimer which disclaims the terminal portion maturing from the present application which extends beyond the expiration date of U.S. 6,835,785 and 6,794,481.

Returning the rejections of claims 1 to 9 under 35 U.S.C. 103(a) as being unpatentable over Amagai et al. (U.S. 6,794,481) in combination with WO 03/020781 at page 2, last paragraph, and as being unpatentable over Ishii et al. (U.S. 6,835,785) in combination with WO 03/020781 at page 3, last paragraph, these rejections are also untenable for reasons below.

An explanation will only be given with respect to WO '781, since Amagai et al. and Ishii et al. are not available as prior art for reasons set forth above.

The rejection states that WO '781 discloses functionalized polyphenylene ether resins having at least one end cap that is a carbon-carbon double bond that is further rejected with styrene or acrylonitrile to produce a copolymer thereof.

The difference from the instantly claimed polyphenylene ether is that WO '781 does not disclose units corresponding to –O-X-O- in the instant claims.

WO '781 generally relates to polyphenylene ether resins and to the manufacture of copolymers of functionalized polyphenylene ether resins having properties controlled by crosslinking and blends thereof [0001], and discloses that “Efforts to create an integrated material of PPE resin and SAN resin have been met with difficulties. Methods for improving the miscibility of PPE polymers with certain styrene polymer resins, such as SAN resins, are desired” [0005].

In WO '781, an end of PPE resin is capped with a styrene group or an acrylic group only for introducing the PPE resin into a graft-polymerizable polyfunctional compound. The idea of converting the PPE resin itself into a thermosetting resin is not found in WO '781 at all.

Thus, an end of the PPE resin is capped with a compound having an unsaturated double bond in WO '781. However, since it is monofunctional, the above PPE resin cannot be thermally cured singly. For this reason, a PPE structure is introduced into a thermosetting resin by copolymerizing the PPE resin with a different polyfunctional compound. Therefore, the cured product obtained is a mixture of the PPE resin and the different thermosetting compound so that the properties of the compound to be

copolymerized have a profound effect on the cured product. Accordingly it is difficult to impart the inherent dielectric characteristics of PPE resin.

In contrast, in the present invention, a compound having a PPE structure having hydroxyl groups at both ends is produced and thermosetting functional groups are introduced to the above compound, whereby single thermal curing becomes possible. Therefore, the cured product obtained by the present invention is not affected by other compounds so that it can exhibit its inherent characteristics.

WO '781 and the present invention are very different from each other with regard to an approach for obtaining thermosetting compound. It is obvious that it is extremely difficult to arrive at the present invention from WO '781.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

Kenji ISHII et al.

By: Matthew M. Jacob
Matthew M. Jacob
Registration No. 25,154
Attorney for Applicants

THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEES FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975

MJ/kes
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
May 19, 2005